

COST and MANAGEMENT

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• EDITORIAL •

The New Deal

As this article is written members of the Dominion Government and the Steel Workers' Union are still in conference at Ottawa in regard to the steel strikes. The Government offer of 55c per hour rate inclusive of cost of living bonus has been definitely rejected, and at the moment no further offer has been made.

In the meantime, two-thirds of the country's basic steel industry is idle, which means that only one-third of the normal complement of steel is being produced. Even this may be stopped within the next few days because the workers at the Hamilton Plant of the Steel Company of Canada threaten to strike unless their demands are granted.

Strikes in wartime may be caused by different reasons. It may be that certain unions recognize that it is the case of "now or never." It may be a matter of embarrassing the Government, or it may be a genuine attempt to guarantee for the workers anything that will give them a reasonable standard of living.

We are not prepared to even hazard a guess as to the reason behind the present strike, but we do suggest that all the trouble could have been obviated had wages been equalized before being frozen. This remark is made with the full knowledge that such a course would have meant considerable delay in establishing wage ceilings and consequent price ceilings, but it is a fact that many people are working for less than what we conceive to be a reasonable living wage.

On the other hand one senses the feeling of the Government that to give a blanket increase in wages because of strike threats simply means more demands and consequently more trouble, which will sooner or later upset the whole economic control.

We hear considerable talk of a new order and a new deal for the workers when the war is over, but very little is being done about it and one cannot blame the average worker if he is sceptical of the sincerity of those who preach this new deal. Would not the workers be much better satisfied if the Government were to pass something like the Beveridge report or even if such a matter were to be discussed openly in Parliament, together with concrete plans for the elimination of mass unemployment? Such matters as annual basic wages should be taken into account. In other words, if the workers are to be satisfied that there is a new deal coming then we must do something about that new deal now instead of merely talking about it in the abstract.

A lot of us need to change our ideas very materially and the sooner we do this the better it will be for everyone.

It might be a good suggestion to immediately establish a commission

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like the Rowell commission to investigate and draw up plans along the lines suggested in order that much valuable time might be saved and that concrete proposals be made ready for Parliament to act upon. The composition of such a commission should not be that of political party representatives but rather representatives of the people themselves in the truest sense.

We believe that such a course would do more to convince the workers that they have a distinct chance of getting a square deal than anything else we know of, and it might have a real effect on strikes such as those now in progress.

Across the Secretary's Desk

The weather during the past few weeks has had quite an effect on attendances at the various Chapter meetings, particularly in those areas where the membership is scattered through the surrounding district.

At the December meeting of the Niagara Chapter and the January meeting of both the Hamilton and Kitchener Chapters, attendances were quite low, due to the fact that out-of-town members could not be present, owing to the condition of the roads. In centres where the membership is not so scattered the attendances have held up extremely well, which is indeed a happy augury for our future.

Nevertheless, I do feel that even in those Chapters who must depend upon out-of-town members to a great extent, there is need for improvement in attendance as far as local members are concerned. I know very well that members generally are working long hours, particularly at this period of the year, but after all most of the Chapters hold only one meeting per month, and surely it is not asking too much for members to turn out for these meetings.

Rather a peculiar fact came to light during January in connection with the meetings in Kitchener and Hamilton. As stated, the attendance at both meetings was quite low and yet these meetings were among the most enjoyable held by the two Chapters in a long time.

It is extremely difficult to obtain the services of good speakers and members are asked to realize this and the fact that it is most embarrassing to have a topnotch speaker appear before a small crowd. The absent members themselves are the sufferers, but this does not help local directors who work hard in an effort to stage most excellent meetings.

On the other hand Harold Wright spoke to members of the Windsor Chapter early in the month and came back most enthusiastic about this chapter. There was a most excellent attendance, and judging from the letters I have received from various members in Windsor everyone enjoyed themselves. Meetings are a vital part of our work and members should attend them whenever humanly possible.

The last week brought a letter across my desk notifying me that a member of the Montreal Chapter, Lieutenant W. S. Fry, had been killed in action at Hong Kong while serving with the Canadian Army. I do not know this member personally but I had heard a lot about him. This is the

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second member of our Society to lose his life in this present war, and it does bring home to us the fact that, as in all wars, we lose many of the best of our young people. His loss will be a severe blow for our Montreal colleagues, but however hard these blows are we shall have to expect more of them as more and more of our young members join the armed forces.

In the January issue we listed a record number of new members for one month. Naturally the list in the February issue is much smaller. On a percentage basis the Windsor Chapter is still ahead in the race for the Fernie Trophy—how about some of the other Chapters getting busy,

R.D.

Chapter Notes

Toronto Chapter.

The January meeting of the Toronto chapter is to be held on Tuesday, January 26th, at the Canadian Military Institute when Mr. H. P. Wright, R.I.A., President of the Society of Industrial and Cost Accountants will speak on "The Registered Industrial Accountant, His Opportunities and Responsibilities". It looks like a fine evening for those who attend.

Hamilton Chapter.

The January meeting of the Hamilton chapter resulted in just about the smallest attendance in years, due to the bad weather, and yet it was one of the best meetings in years. The speaker was Mr. T. Norman Dean of the Workmen's Compensation Board, who addressed the members on the Workmen's Compensation Act. His address was very well received and the discussion period lasted for quite some time. Early in February the chapter will hold a special meeting to discuss the Rum Plan and also to discuss the provisions of the Beveridge Report. On February 26th, the chapter will stage a Joint Meeting with the Toronto chapter at the Royal Connaught Hotel when the speaker will be Mr. Harold G. Cutwright, Vice-President Standard Brands Inc., New York City, who will speak on "What Management Expects From The Accountant".

Niagara Chapter.

The January meeting of the Niagara chapter will not be held until Thursday, January 28th, when Mr. R. E. L. Johnson of Stevenson & Kellogg, Ltd., will speak on "Special Problems in War Industries." It is to be hoped that the weather will moderate sufficiently to allow members to get out to this meeting.

Kitchener Chapter.

It was indeed unfortunate that the January meeting of the Kitchener chapter was scheduled for the night of the big storm. This caused a new low in attendance, but despite this fact the meeting was extremely enjoyable and the discussion period was something to talk about.

The speaker was Mr. M. C. Coutts of the Sangamo Company Ltd., Leaside, Ontario, who spoke on "Costing in Peace and War."

Windsor Chapter:

The December meeting of the Windsor chapter was postponed to

LITERATURE RECEIVED

January 7th and resulted in a grand attendance and an extremely fine meeting. The speaker was Mr. H. P. Wright, R.I.A., President of the Society of Industrial and Cost Accountants of Ontario who spoke on "The Registered Industrial Accountant, His Opportunities and Responsibilities." Mr. Wright was very well received by a large attendance and the meeting was a most enjoyable one.

The second January meeting will be held on Thursday, January 28th, at the Norton-Palmer Hotel, when the speaker will be Mr. R. J. Lyons of the Chrysler Corporation of Canada.

Montreal Chapter.

On Friday, January 29th, at the Faculty Club, McGill University, the Montreal Chapter will conduct its late January meeting when Mr. H. C. Reid, B.A., M.S., (Trans.), General Statistician of the Canadian Pacific Railway, will speak on "Railway Costs." This is a subject which, to our knowledge, has not been previously discussed at any of our meetings, and it should prove most interesting.

Through the courtesy and kindness of Mr. R. McBrien, of the Canadian General Electric Co., Ltd., a sound film, "Railroadin'" will be shown at this meeting. The film is both interesting and educational and serves as an excellent introduction to the subject chosen or discussion.

Literature Received

The Distribution of Overhead Costs in Companies Handling Both Normal and War Contracts.

N.A.C.A., Dec. 15.

A most instructive article on a real problem which has caused many headaches to Cost Accountants.

Photography in Accounting.

N.A.C.A., Dec. 15.

Undoubtedly many Accountants and Office Managers have been faced with many problems regarding the storage of old Accounting records. The use of Microfilm for photographing such records and thereby reducing the urgent need for storage space is described in this article.

Pension Plans.

Changes in the Federal Laws Which Affect the Renegotiation of War Contracts.

N.A.C.A., Jan. 1.

These two articles are, of course, of particular interest to those whose business is located in the United States but are also of some interest to Canadians in that they deal with matters which are of interest to all Accountants.

The Importance of Budgeting.

The C.A. in Australia, Oct., 1942.

A "Brief Explanation of the importance of Budgeting". It stresses the increased need for budgeting under wartime conditions and gives some sound reasons in advocating budgeting.

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Training the Old Worker for the New Job.

Business Management, December.

A short but instructive article on a matter of prime importance in these days of labor shortage.

Methods of Accruing Depreciation.

Irish Acct. and Secretary.

A short but informative article of interest to all Accountants.

The Controlled Materials Plan.

N.A.C.A., January 15th.

A Manual Payroll System for Present Day Needs.

N.A.C.A., January 15th.

The first article provides a non-technical but accurate description of the Controlled Materials Plan in use in the U.S.A. The second describes a Manual Payroll Accounting Method with several descriptive features which should be of real interest in these war days.

How Group Bonus Works.

Factory Management and Maintenance, January.

A most complete article which should be of special interest to those interested in time study and incentive programmes.

Office Management.

The Irish Accountant and Secretary, October.

An extremely able and instructive article on all phases of office management.

Job Evaluation.

The Quarterly Review of Commerce, Autumn Number.

A well-written and decidedly interesting article on a subject of real interest.

Inclusion of Fixed Overheads in Costs.

The Chartered Accountant in Australia, November 20, 1942.

An exceptionally good article that should be studied by all cost accountants.

New Members

Windsor Chapter.

A. E. Spearman, Backstay Standard Co. Ltd.

G. N. Jones, Chrysler Corp. of Canada Ltd.

J. A. Copland, The Ford Motor Co. of Canada Ltd.

J. G. Maxwell, Chrysler Corp. of Canada Ltd.

Toronto Chapter.

Fred A. Maddock, Systems Research Company.

N. J. W. Bradshaw, Dom. Govt. Treasury-Cost Section.

Ian Cameron, Dom. Govt. Treasury-Cost Section.

Windsor Chapter.

V. MacQueen, Canadian Industries Limited, Windsor, Ont.

Ottawa Chapter.

A. Rivers, Hull Iron and Steel Limited, Hull, P.Q.

H. W. Gee, Ottawa Car and Aircraft Limited, Ottawa, Ont.

ACCOUNTING FOR RAW MATERIAL COSTS IN FOOD CANNING

Hamilton Chapter.

H. Chadwick, Chadwick Brass Limited, Hamilton, Ont.

T. Baxter, Dundas, Ont.

Montreal Chapter.

C. Bernier, J. Alphonse Bernier Ltd., Montreal.

A. E. Balcombe, C.A., British Ministry of Aircraft Production, Montreal.

Greater Love Hath No Man

WE LEARN WITH EXTREME REGRET THAT A SECOND MEMBER OF OUR SOCIETY HAS BEEN KILLED IN ACTION. THIS IS LIEUTENANT W. S. FRY, A VALUED MEMBER OF THE MONTREAL CHAPTER, WHO HAS BEEN LISTED AS KILLED IN ACTION AT HONG KONG.

WE EXTEND TO THOSE HE HAS LEFT BEHIND OUR MOST SINCERE SYMPATHY.

Accounting for Raw Material Costs in Food Canning

By FRANK R. BEAR,

Secretary of Stokely-Van-Camp of Canada Ltd.

Address delivered before the Windsor Chapter of The Society of Industrial and Cost Accountants of Ontario, November 26, 1942.

Raw material, for purposes of this discussion, is considered to be produce grown seasonally, and usually under contract with growers. The best known canned foods are corn, peas, and tomatoes, but for all practical purposes, a discussion of tomato raw material costs is a sufficient exemplary coverage of the subject.

Selling prices of canned products are controlled by the Wartime Prices and Trade Board, and for tomatoes, the price to the grower is also controlled. This produce price is set by the Ontario Farm Products Control Board. Under present conditions, canners usually follow the recommendations from Ottawa as to what growers are to be paid for the non-control items. For the present, Ottawa also designates the various sizes in which the different products that they allow to be packed, can be packed.

Starting with tomatoes, the finished product can be whole packed tomatoes, tomato juice, tomato soup, tomato puree and tomato sauce.

Under present regulations, tomatoes are packed in 28 oz and 105 oz., and tomato juice in 20 oz., 26 oz., and 105 oz. sizes. Packing of tomato soup is permitted in concentrated form, and in 10 oz. size. The 105 oz.

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size is packed 6 containers to a case; the 10 oz., 48 to a case; and the others, 24 to a case.

The growers contract includes the cost per ton of the raw material delivered at the plant, and to determine the cost of all the raw material received, we need only keep a record of the weight of raw material received from the growers. By simple multiplication, we can obtain the total cost. Distributing this total to finished product has never been worked out as an exact science. It is still somewhat of a constant problem with "quicksilver" type answers.

The purpose in signing a contract with a grower is to provide for canning the raw material to be grown on a certain number of acres. Very definitely, signing of a contract does not guarantee a crop. If the grower gets a crop the canner gets his raw material, and if enough growers do not, then the canner can decide whether it will pay him to operate. If he has a few plants, he can afford not to operate one in a short crop area; but if not, he usually has to operate and pray.

Most growers have to be sold on the idea of growing canning crops, and for that purpose field men are employed. They go out in late Winter and early Spring, signing up growers and advising them as to type and variety of seed and fertilizer. A tomato grower would be advised to use early and late maturing varieties of plants, a fertilizer suitable for his particular type of soil, and possibly special starter solutions to hurry up the crop. For all products, the reason for promoting early maturity is to get in ahead of an occasional early frost, should that occur. When there is a late frost, the later varieties assure continued operation of the plant through the lengthened season. To guarantee a uniform finished product, most canners select and distribute seed to the grower.

During the growing season, the field man makes regular calls on the grower to check on the progress of the crop. On the basis of the field man's report, the canner can make his final plans for operation. An experienced field man can usually closely guess the yield of a particular field. Putting all the reports together, the canner can get a fairly close guess as to the probable quantity of raw material he will be receiving, and also about when he can expect to start receiving.

Once the tomatoes are ready for picking, the grower calls the plant to find out when he can bring his load in. He picks his field over into baskets or crates of uniform size provided by the canner. Usually a load is scheduled in every fifteen minutes to avoid waiting that would be involved in indiscriminate deliveries. If scheduled to do so, his trucker brings them in to the cannery, stopping first at the grading station. If the load is of acceptable quality, it is trucked over to a scale for weighing in. The scale man makes a record of the gross weight on a weight receipt and the load goes on to the receiving platform to be unloaded. The same number of empty baskets are loaded back on to the truck and the truck run back over the scale. This empty or tare weight is then recorded on the weight receipt and deducted from the gross to get the net weight, which is the weight to be paid for. The grower gets a copy of this receipt and another copy is used to make up a tally of receipts for the day.

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Since the prices are set by contract, the total value of tomatoes received can be quickly figured at the end of the day.

When the tomatoes were unloaded at the receiving platform, they were dumped into flumes carrying them into the production lines. After being thoroughly washed, the tomatoes come up on to the inspection belts where they are sorted as to their suitability for whole pack tomatoes, tomato juice, etc. The inspection operation also includes trimming off any bad spots.

Tomatoes that are selected for whole pack travel along on a belt and are picked up by the peelers who pare off the skin and any inedible spots such as stem ends. The skin and trimmed waste are dropped into disposal containers and cannot be used further in production. Peeled tomatoes are then conveyed to fillers where there is a further inspection and selection, and from there to the closing machines. Tomatoes for juice go through the necessary processes of production, and then through the filling and closing operations. The containers are then put into special trays to be cooked in pressure cookers or retorts. After cooking, the trays of containers are conveyed through a cooling canal and then to the casing out department for warehousing. Labelling is usually done only when the canned goods are ready to be shipped.

As finished products from the same raw material we have one that practically resembles the original raw material, and the rest are of varying degrees of liquid consistency or specific gravity, and their colour is their only visual connection with the original raw material.

Whole pack tomatoes have retained their original identity. Tomato juice is a liquid product that has not required any condensing but both soup and puree have. It is impossible to weigh the contents of the liquid products and obtain a weight of raw material used. However, by tests and experience it is possible to arrive at the equivalent weight of tomatoes that, under ordinary circumstances, should have gone into a particular size.

For tomato juice, this means we can establish a certain pounds per case and multiply by the cases packed to get total pounds. This cannot be done with soup and puree because of varying degrees of specific gravity and for them, an equivalent weight of tomatoes in so-called starting gallons has been developed. This refers to the fill of the boiling or reducing tanks before the boiling down starts. A record is kept of the number of batches made and their starting gallons, and at the end of the day, this is totalled. By multiplying total starting gallons by the pound of tomatoes that should have been used per starting gallon, we can arrive at the total usage.

In actual practice, we refer to this type of usage as the standard usage without waste. By extending the standards per case and getting totals by products, a grand total standard usage figure is obtained. Taking the previous night's carry-over and the day's receipts, less the new carry-over, gives the actual usage for all products.

This total is then actually distributed to individual products by proportion over the standard quantities. The raw material cost by product is then calculated by multiplying these poundage figures by the contract cost. Within each product there is usually a size known as the base or equivalent size. For example, the base size for whole pack tomatoes is the 28 oz. size, also known as a $2\frac{1}{2}$ size. Base sizes are usually chosen because of their

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popularity. Over the entire pack of all products we have an over-all equivalent size known as a No. 2, or 20 oz. Its purpose is to give a common factor or denominator to use when referring to the total packs of all products. Using the No. 2 equivalent we can more intelligently compare one year's pack against another, especially since sizes tend to vary in importance from year to year.

Having obtained the raw material cost by product, we can distribute this by individual sizes on the basis of the base size pack for each product. The base pack is calculated by multiplying the number of cases of each size packed by the ratio reducing that size to the base size. Total base size cases are divided into total raw material cost for the product, and a per case cost obtained. This per case cost is then multiplied by the base size packs to arrive at the total cost for each size within a product. By using base size pack for distribution of totals to sizes, we are dealing with totals having the same per case contents. Once the cost amount is obtained for each size, we then divide by the actual of that size to arrive at the apparent actual cost per case.

Where company custom does not require a lot of detail in daily costs, a daily cost can be worked out for the base size only and for all practical purposes, supply all the necessary information that a detail statement would. Since most daily cost reports are made up for control purposes, a control on the base size is sufficient. The other sizes always bear a direct relationship to the base size, and would proportionately follow base size changes. Also, use of a base size report means fewer figures for the production manager to watch. If, for tomatoes, it is known that pounds per case of raw material used in 28 oz. containers were 10% higher than the day before and higher than the budget, no other information is needed to point out that something is wrong. It is then a matter of investigation to find out what was wrong.

Raw material usage can be affected by several factors, some due to mechanical reasons, and others cause primarily by nature. Under ideal growing conditions, nature would give forth with a perfectly formed and coloured tomato having only the proper degree of moisture. Unfortunately, ideal conditions only exist in hopes or imaginations. Nature can and usually does dab a few yellow or black spots on tomatoes, and these have to be trimmed by inspectors or peelers.

If tomatoes are too small when matured, too many will be required, though somehow or other, it seems that normal waste trimmed off remains constant. Some days the tomatoes received contain excessive moisture content, and in the processes the weight of tomatoes on each other, such as in peeling pails, tends to force out the excess moisture. This moisture does not, therefore, get into the products, but it has been weighed in and included in the total of raw material used.

Poor peeling can cause excessive waste. If a peeler is not experienced, she will usually peel off part of the tomato itself along with the peels. There is a daily report to check on this factor which shows the number of pails peeled per case of tomatoes. If the peeling report shows a variance, then the source of trouble is localized, and it is a matter of weeding out the inefficient peelers.

Machinery breakdowns can be the cause of excess usage, either by

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accident or ignorant tampering and carelessness. Valve wheels seem to have a peculiar attraction for some individuals, and they cannot resist turning them. This usually results in the emptying of a batch down the drain. A conveyor breaking will cause enough spill over onto the floor to effect usage. The value of this waste is customarily automatically included in the raw material cost of the product, since no separate record of waste is possible. Any element of waste is very evident in the excess pounds of raw material per case over budget. The main reason for not having a separate waste cost seems to be that by custom or habit, it becomes more desirable to know how many pounds of tomatoes the growers had to deliver over the scale to produce one case of the finished product.

In calculating raw material costs, there is included only the amounts paid to growers for tomatoes actually delivered. Expenses and salaries of the field men are included in a separate account as crop expense. Any hauling, which may be for the company's account, is also excluded from raw material cost, and kept in a separate account. This is likewise true of grading, receiving, weighing and any other expenses up to actual production operations.

Simplification of Cost Records

By G. F. RACINE,

Cost Accountant, Canadian Vickers Ltd.

At a meeting of The Cost and Management Institute at the Faculty Club,
Montreal, November 13, 1942

In these days of high speed production for essential war materials, the cost accounting system must be designed to cope with the problem of expanded production, more rapid manufacture and a myriad of details that never entered the peace-time picture of the manufacture of civilian goods. Cost accounting, as you all know, embraces a very large field. Different systems of doing practically the same thing cause a difference of opinion as to which has the greater value in efficiency. This is but one facet of the keystone of cost accounting, however.

Production lines fight constantly against bottle-necks; the same applies to cost accounting systems for repetition and duplication represent bottle-necks in them. Simplification, therefore, is the key-note to a harmonious method of maintaining an accurate tabulation of records.

On the subject of records: different systems are utilized in different plants. Their ultimate object is the same—a base from which to calculate costs, which are essential to the successful operation of the business—the only difference in their operation is in the men's minds who conceived them. An illustration of differences of opinion recalls a conversation with a man on pre-natal influences; he claimed no such thing existed. Then he went on to tell of how his mother, before his birth, suffered a fall down a flight of stairs, breaking an armful of phonograph records in her unfortunate plunge. But, he maintained that: "It didn't make any difference . . . It didn't make any difference . . . It didn't make any difference . . . It didn't make any difference."

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True, there is little association between pre-natal influence and cost accounting, with the exception perhaps of the male parent's emotion on discovering he was the progenitor of triplets.

Avoidance of complications, therefore, should be ascertained and simplification be the watch word to greater efficiency in the plan, when a cost accounting system is set up.

In many shops, even to-day, the cost system is looked upon as satisfactory if in a primitive manner it shows the cost of the production of the items manufactured. The modern conception of a cost finding system is far broader. Such a system must not only show costs (as such) but must show them in a way that deductions may be drawn as to the reasons for them and the possibilities of reducing them.

A good cost system should be the guide and counselor in directing the activities of the business. But, on the other hand, care must be exercised that the system installed is not too complex and that the cost of obtaining the detailed information is not greater than the gain that must result from its possession.

A complex system gives no assurance of accuracy. Further, the complexity may result in what I may term too much paper work, and in fact may be a distinct hindrance to production.

An over zealous accountant—or one whose range of vision is narrowed by the intricacies of his profession—may install an over-elaborate system which may act as a clog on the actual machinery of production.

The installation of a satisfactory cost system requires, therefore, more than a knowledge of cost finding methods. It requires knowledge of the particular industry itself and a keen perception of the detail to which cost finding is to be carried. A skilled accountant can save large sums in the operation of a system in his perception as to necessity of rough detail, against refined cost statements.

A cost finding system has been referred to as being one of the most valuable kinds of insurance, when properly designed and operated, that a business concern may have. This form of insurance prevents costly mistakes and provides benefits that far surpass the incidental cost of operation.

I believe the following thought bears reiteration, namely, that the primary function of a cost finding system is to control the elements of costs and to determine them through proper allocation of all expenditures made. But a cost finding system does more than just provide the means of ascertaining costs. As mentioned before, it provides data which the management may use in determining future operations.

These remarks have been made with the purpose in view of making us realize that, although a good executive may have a complete understanding of production, selling, accounting and finance, nevertheless, it is the cost accountants' duty to present cost analyses in such a clear, concise and summarized form, that the facts so determined may be put to the proper use without delay. Such delay may arise if the cost information is not presented in a clear and concise manner.

It is my belief that the Cost Accountant should not be wholly responsible for the installation of the system. It should be the result of the joint effort of both the Cost Accountant and Production Manager. It is evident that

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to apply the principles of accounting, which are definite and permanent, to costing, the Cost Accountant should have the assistance of some one well versed in the details of manufacture, one who has the knowledge to discern which details are desirable and which are useless.

The Production Manager and the Cost Accountant must obtain the assistance of others. I think every one of us, with a few moments thought, will realize the invaluable aid that may also be obtained from the Engineering Department in the setting up of a cost system.

The general underlying principles of cost finding are universally applicable, and if these principles are clearly understood there should be little difficulty in developing the forms suitable to the work in hand.

When cost of production and operating is accurately known it should be tabulated so that it may be compared with previous and subsequent costs. In this manner any variations in the cost of manufacture are immediately determined and any economy that may be necessary is at once brought to the attention of the management. Thus, they are enabled to acquaint themselves with all the details of the factory, to be fully conversant with the labour and material cost, and to know from period to period the results and conditions of the business.

Cost accounting is not, however, standardized so that it can be applied to any manufacturing business, nor should a business be expected to conform to any particular system. On the contrary, the system must be adapted to the particular needs of the business.

It is evident that the manner in which costs are recorded and the detail with which the recording is carried out will vary greatly with the enterprise and, may I say, with the point of view of the management.

The several purposes for which cost data is collected may be grouped under three main headings, namely:

1. To show the actual cost of operations or performance.
2. To serve as a basis for predicting future performances.
3. To form the basis of managerial and other reports.

The detail necessary in recording costs of production will vary with the relative amount of consideration given to the three general uses of cost data and with the amount of detail involved in the job concerned and the character of the processes used in doing work.

It can clearly be seen that the methods used in summarizing costs for a continuous process factory, or for one using processes in such manner that it is difficult to determine where one job stops and another begins, will obviously be different from a production order method by which each job is kept distinct from all others.

As our industries are to-day engaged chiefly in War Production the job cost or production order method is generally employed.

The conditions in a factory that may be of a complex nature and the cost system that will be adequate for such a place needs careful consideration. As I have mentioned before, no single method of cost finding is applicable to all kinds of industry.

The forms required should serve to carry the correct information as to the method of doing the work, and at the same time, serve to segregate operations in such manner as to allow intelligent recording of costs.

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Every effort should be made to keep down to a minimum the number of forms consistent with the absolute requirements of the work.

A large organization may use a great number of forms, and to the uninitiated this is often confusing. Let us consider, therefore, that there are after all only two general types of documents:

First:—Orders, or instructions as to when and which work is to be done.
Second:—Returns, or records of how work has been performed.

Production orders are instructions emanating from officials charged with the duty of directing the work. The production order, simple in form, carried the job number and letter or drawing number, which identifies it with the work. We might visualize them as travelling down the organization chart.

It follows that the detail in which the forms are made, will govern the detail in which returns can be prepared.

Returns include all statements that give the result of operations, records of materials used, whether direct or indirect, also records of time expended and wages paid. Returns may also include all summarized reports, etc. The returns have their origin where the work is being done, and with stores withdrawals combine to result in the finished product.

We can visualize returns as travelling upward from the source where the actual operations are performed, being constantly consolidated into briefer statements and finally merged into the general accounts.

We might digress here for a moment and state that present day accounting machinery has greatly simplified the procedure of collecting cost details.

Mechanized methods reduce to a considerable degree the number of clerks that would otherwise be required. However, their place is taken by those operating the machinery. The information produced by mechanized methods should be nothing more or less than that required. However, proper supervision must be exercised over the original distribution of the material to be fed into the machine.

Let us now review for a few minutes, the function of the production records which are the source providing the necessary information for the time and cost offices to carry out their work.

These Records are generally numerous, and in preparing this paper I have referred to the more essential of them. It is not to be construed, in the omission of the others, that their function is not an important one.

The first essential Record, of course, is the Tool Order, which comes from the Engineering Department, and is sent to the Production Department with the necessary drawings for releasing tool work to the shop. This obviously is the initial step preparatory to the commencement of operations.

The next step is issuing the Production Order, which should not be complex but, at the same time, should carry the necessary information, such as:

Date of Issue	Description
Order Number	Assembly Number
Quantity	Batch Number
Part Number	Material Required
Specifications	Routing of Parts

SIMPLIFICATION OF COST RECORDS

Several copies are struck off, at the one time; one for each of the following: Route Tag Clerk, Shop, Stores, Control Office and Accounting.

The Route Tag is made out with the same information thereon as the Production Order, and accompanies the Production Order to Stores for preparation of material before being issued to the Shop. When reaching the Shop the Route Tag stays with the material at all times and may be utilized as a Bin Card in finished stores when the part is finished.

Production Control:

This record in the form of a card is for the purpose of showing quickly a complete record of all details and assemblies and combines a Production Record, a Progress Chart and a Stock Record of Finished Parts. It is the centre of Production Control. Each card should contain the following permanent information:

Part Number	Routing of the part
Description	through the necessary operations.
Tools for Fabrication	

And in addition—this Record may be divided into three sections:

1. Parts issued to Shop.
2. Parts issued into Finished Stores.
3. Parts issued on Assemblies.

Parts Issued to Shop—When orders are made out an entry is made on the card listing the appropriate information gathered from the Production Order and entered as soon as the orders are made out. The balance column shows at all times the quantity of parts which have been put into the shop less the parts rejected.

Parts Completed—An entry is made from parts received in Finished Parts Stores on the reverse side of the card. This information is entered daily, the balance column showing the quantity received to date.

Parts Issued from Finished Parts Stores—These are entered with appropriate detail information taken from Production Orders.

Therefore, at all times the balance column of Parts Issued shows the total quantity issued to date, quantity being reduced for rejections. The difference between the Parts Issued to the Shop and Parts in Finished Parts Stores is the number of parts in the Shop for Assembly.

Material Control—Material receipts are posted on cards showing memorandum number and other pertinent detail. Material issued is posted from the Requisitions and the following information recorded: Production order number, date material is ready for issue, material issued and balance in stock.

The construction of the records referred to and those I have omitted, such as Shortage Reports, Material Urge Sheets, Rejection and Rework Tags, Inspection Reports, Chaser Lists, Tool Reports and Tool Issue Slips, should be drawn up in such a manner as to contain the essential information required, in a clear and simple form. I would add that the Card or Record Form that will be excellent for a particular purpose in one shop may be useless in another. I have not attempted to describe the forms because if the purpose of the blank can be clearly determined, the exact form of the ruling and of the printed content is a matter to be left to those planning the system.

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To put it briefly, complexity is fatal to system. Every effort should be made to keep down the number of forms or blanks to a point consistent with the absolute minimum requirements of the situation.

In the installation of a cost finding system, or in operating one already installed, one should have a clear idea of just what results are desirable. A cost finding system should be planned in advance as much as, if not more than, any other part of the factory system. It should obtain just the results wished, and it should not gather a lot of useless data. A system can fail because of too much detail, as easily as it can fail because of lack of detail. It is important, also, that the results obtained be made use of, for cost data which is not used, represents wasted money.

The introduction of a cost finding system is often difficult. This is true partly because the human element enters largely into success or failure of nearly all so-called systems. Workmen and Foreman are not generally interested in cost finding methods, and for this reason it is well to consider the necessity of keeping in mind simple basic cost accounting records. It often takes considerable time to put a cost finding system into successful operation, and it always requires supervision and the firm support of the management to maintain it.

When a cost finding system has been developed which presents to the management complete costs of units of production; which shows intelligently where the money has gone, whether for direct or indirect items; which embodies the relative advantages of different methods and which serves to check inefficiency of employees, and when such a system has been perfected, the best possible safeguard against failure, and guide to future operations has been attained.

I have not touched upon overheads for the reason that, if the accountant bears in mind the general thought of this paper, and applied it to the accounts constituting Burden, it will resolve in the minimum number of accounts being set up, having in mind sufficient detail to provide factual analyses when desired.

In conclusion, whilst I have presented this paper in such a way as to deal generally with the subject, nevertheless, I would like to say that no doubt a good many present may have specific problems in mind upon which I have not touched. However, I think that you will realize that in a talk of this nature the subject must be dealt with in a general manner as it is impossible to cover a subject such as the Simplification of Costs records or all the detail problems met from day to day by the Cost Accountant.

Factory Costing

By A. GREENHILL, F.F.I.A.

Being a Lecture Delivered to the Accountants' and Secretaries' Educational Society, Brisbane.

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PART III—THE APPLICATION OF THE SYSTEM

In trying to explain the application of the system, I must also explain that selling prices in our industry do not rise or fall as an immediate result

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of the rise or fall in costs. In some places they do. The simplest example I can give you is the fruit shop, where to-day a dozen apples cost 1/- and to-morrow 1/6. With us, if a standard type of motor body is sold for £75, that price stands, and we make one perhaps for £70, and due to alterations in conditions, we might make the next one for £69 or the next for £71, clearly understood.

The purpose of our costing is two-fold. Firstly, we use it when calculating the cost of production of each job for the purpose of seeing what margin exists between the cost price and selling price.

I will deal with "Application" as regards the first aspect.

When we set out to estimate our cost, we know that certain materials and certain labour will be involved, and we refer to our average labour employment revealed in our last period. We also refer back to our budget to see what the output of units is likely to be, and we try to form an estimate of whether the numbers employed in each process will be greater or less than during the last period, and we then peg what we consider should be the average employment position in each group. We then value our labour in each group according to the value set out on the scale at this pegged point. Thus, if we anticipate that there will be 231 men employed in Group 1, when estimating our selling price for the product, we would value the hours expended by Group 1 at the rate applicable to 231 employees, and similarly, throughout the groups, according to the various processes which are to be carried out.

This is for the purpose of fixing our selling price.

We now reach the second aspect when we are actually producing, and we are starting to ascertain the cost of the article produced. In valuing labor, we do not value it on this pegged figure, but rather at the fluctuating figure applying from time to time, so that there is a rise or fall in the labour value, either above or below the pegged figure on which the original estimate was worked, consistent with the number of operatives employed in the group.

To do this, we keep a weekly check on the number of employees actively engaged in each group, and if the number employed during this week is 227, then we charge this week's labour to the job at the rate applying when 227 men are employed in that group.

Next week we may have 234 men employed, and we charge at the rate applying to 234.

Presuming a body to take six weeks to produce, it is possible that the labour charged on that body may be at six different average hourly rates, but we must bear in mind that our object is to ascertain what the cost is to produce the the job as apart from the selling price. We want to find out what margin results between cost and selling prices, so we endeavour to get as near as we can to correct cost.

I believe that this is something fairly new, but we have been operating it for some years now with unqualified success. It will, of course, be understood that when you have a group embracing 230 operatives, the variation resulting from a difference of 8 or 10 men in the group is practically nothing, so that hours recorded would cost practically the same with variation in number of up to 10 employees. This, of course, is not so in the case of

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a small group, where the work is carried on by, say 4 or 6 operatives, but as these small groups are only subject to fluctuation in the same proportion as the big groups, it will be seen that no variation at all takes place as a rule while normal production is going on.

I hope I have made that quite clear, as it is the basis upon which the cost of goods produced is arrived at, and it covers both overhead and wages.

MATERIALS

Materials require a considerable amount of control, but fortunately they do not require nearly so much detailed explanation as the cost elements which I have just completed.

Materials normally are purchased for two purposes, either for general stock or for use on a special job.

In our cost system, we arrange that nothing must be bought without an official purchase order. This purchase order possesses three copies, one of of which goes to the costing department. On that copy is shown whether the goods are purchased for general purchases or for special purchases. These special purchases are all entered into a book, and it is the duty of the costing department to keep that book cleared daily by making a record opposite to the entry of the purchase, of the fact that it has been charged on to the cost summaries covering the particular job, thus we ensure that all materials specially purchased for a job are charged to that job.

The charging of materials out of the general stores is not quite so easy, but there are two classes into which this process falls. Firstly, the requisitioning of materials from the general store for general production; and, secondly, the requisitioning of sundry items.

To make this thoroughly clear, I must briefly touch on production methods, and will explain that after a design has been agreed upon it is released into the factory accompanied by a complete specification of all the materials required for it.

This rule applies all through, whether the factory is making up sub-assemblies or parts, a material schedule must accompany the order for the sub-assembly or the parts. These materials schedules go through the stores and the stores department makes up and packs in a small container, sets of parts as set out on the standard materials specifications, so that when a requisition arrives at the store, the workman does not have to write out in detail the number of screws of each size, and the number of bolts, of each size, the quantity of handles, hinges, etc., that he wants, but all that he does is requisition parts for assembly number so and so. He is then handed a complete set, ready packed in the container.

In practice, we have found instances where a man would receive two handles for a roadster body, and perhaps a week after, the same man or another man would go to the store for another two handles for the same body. We are, of course, aware that only two handles are needed for a job. This made it necessary for us to institute a special system of check to see that any materials supplied on the standard materials specifications were not requisitioned a second time as sundry materials.

These sundry materials consist of all sorts of small things which cannot be listed on a standard materials specification, and by close analysis of all

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sundry materials we find and stop leakages which would cost us hundreds of pounds a year.

As an example, a man has drawn from the store a standard specification of material which embraces four hinges, and one of these hinges is defective. He must return to the store to requisition the fifth hinge as a sundry item. This, of course, immediately comes under observation, as the sundry items are checked each day, and the defective hinge is promptly charged back to the supplier and he pays for his defective work instead of our company paying for it.

That is only one example—the same practice follows right through. From these observations it is obvious that materials from the store are only issued on requisitions, whether they are requisitions for standard sets of parts or, as in some cases, requisitions for special parts, as required.

This system saves a lot of time, but involves a certain amount of checking to be sure that there is close co-operation between the factory supervisor and the costing department to see that no alterations are made in the standard materials specifications without the costing department's knowledge. It will be seen that no materials beyond the standard specification can be taken without our knowledge, but it so often happens that a reduction in the materials specification can be overlooked, and in our experience we find that it is not the general rule for the workman to draw attention to the fact that they are being over-supplied with materials.

I could go on considerably with this lecture to discuss the way in which we bring all these matters—overhead, labour and materials into control with the financial accounts of the company, and I believe that our way of doing it is most effective and possibly one of the simplest methods that can be achieved.

However, I believe such matters to belong to a lecture on "Cost Accounting" which could be equal in length with this lecture, so perhaps on some other occasion I may be given the privilege of talking to you on that aspect.

Upon the store's organization depends the success or failure of our endeavour to produce the profit and loss account each month. Where the stores' organization is good, it is possible to ascertain the stock on hand at the close of each month and without too much calculation to calculate the value of work in progress each month. With this information, it becomes a matter of simplicity to prepare a statement such as appears before you each month which will show the result of the trading operations of that month and enable you to compare the totals of controllable, uncontrollable and policy-dictated expenditure and also the wages paid and materials used by means of easy comparative statements.

We prepare such statements every month and our production cost can thus be closely regulated. It is of inestimable value to us to know how the actual figures being realized compare with that estimate or budget which we produced at the beginning.

You will remember that we set out to get the same turnover with slight variations in cost, and we want to know before the end of twelve months just how it is working out.

To go into the detail of this is also a matter better described as "Cost

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Accounting" but it can be done and is done and by our particular method the results we get more than outweigh the slight expense of doing it.

GATHERING THE COST OF JOBS

I would just like you to spare a moment to have a look at the specimen of a cost summary together with its subsidiary information. Most of you are familiar with this type of thing in one way or another, but ours is a multiple form which shows on the front a complete summary of the cost involved in four different departments of the business, both as regards materials used and labour employed. Copies are produced on a special typing machine and are shot through various sections of the factory. The materials sheets are in charge of the leading hand in each section, who notes anything special which constitutes a departure from standard materials on his materials sheet. The labour sheets remain in the costing department, and the daily time cards are entered up thereon, according to the processes involved and the weeks. The reason why the weekly distinction is made was previously outlined.

When a job is completed, it is invoiced and the invoicing department supplies to the costing department daily a list of all the jobs passed out during the day. The costing department then proceeds to recover back from the factory all those materials sheets which have been sent out. The result is that we have the whole set of forms all collated again ready for the costing section to get busy and give us the figures. Labour costs are now calculated, standard materials specifications are entered on the appropriate materials sheets, and sundry stores issues are priced and calculated, and then the whole is summarized, the information being shown at the bottom of the form just how much the job has cost us to complete and how much we get for it.

CHECK ON THE ESTIMATING DEPARTMENT

I mentioned earlier in this address that when we originally fix a price at which we will take an order we estimate the length of time that it will take to produce, and we assess the materials. When we make that estimate, we set out all the information on a similar set of forms, all of the one colour, as distinct from those which we will call "Operation or Actual Job Sheets." We now proceed to compare the original estimate set with our realizations, and we soon find out how near we are coming to our original aim. The costs revealed from time to time in a business such as ours vary considerably. They must vary, because there are so many difficulties with which we must contend. Take for instance, the weather, when it is hot and dry, the lacquer in spray jobs dries perfectly. After two or three days' rain when the humidity is intense, the lacquer, instead of drying, blushes, which means that the process must be done again.

With our new enamel process we are overcoming this, but it is not everybody who will buy baked enamel yet, and we must be ready to supply whatever the customer asks for.

Then, take another case, where stock panels are stamped out and stored, and for some reason or other one or two are not properly oiled, this entails four hours cleaning of rust before assembly.

All these things are met with in production, and are liable to be over-

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looked in theory, so that I feel capable of producing many arguments to confound anybody who considers that each standard product in our trade, at any rate, must come out at the same exact figure.

This rather introduces the question of standard costs, but time will not permit of our talking of standard costs to-night but there is a system of costing whereby our profit and loss accounts can be produced to show results which should have been attained had a definite standard been adhered to, and that profit and loss account also contains a section which shows the variation between the standard figures estimated and the actual results realized. That, too, is cost accounting, as apart from factory costing.

There are one or two other aspects which I wish to endeavour to explain. Frequently orders are lost through a misconception as to what can be attained by way of production under close costing control. Take, for example, any item in this room—for instance, a chair. Many manufacturers, if they were asked to submit a price for chairs of that type, would proceed to dissect materials and the labour involved, and calculate it up according to their own particular basis of costing, and thus produce a figure which they would consider a reasonable figure at which they could make the chair.

There is another and much more important aspect, which frequently escapes consideration, and that is that instead of starting from the raw materials and labour and working up to a price, suppose we start at the opposite end and work back to the raw materials and labour. That sounds a bit peculiar now, but let me explain that that chair is already being made by somebody, and the price has already been fixed.

We will presume that the chair can be purchased in any local shop for £10. Then, if our method of estimating brings out a price of £12, we are, on the face of it, unable to compete with the product at present on the market, and our enquirer should be advised to go and purchase his chair somewhere else. On the other hand, knowing that the chair is readily available in the local shops, we find out at what price, and having learned that it can be bought for £10, we immediately set out to assess the amount of materials in it. This, taken away from our £10, gives us the maximum amount which we are able to expend on production and labour, and this is where costing is of the greatest value to us.

We proceed forthwith to detail our production processes and the length of time that they will take to perform. Having ascertained the total, we see how this compares with the amount that we have left to spend on production time.

Our calculation quite likely exceeds the amount which we appear to have available, but it then becomes the duty of the costing section to reduce the time down until a competitive figure is reached, and then the factory must set out by means of controlled time to reach that figure. This may not be possible, of course, but it is frequently found that when the production set-up gets into motion, estimated times often go by the board and set times can, more often than not, be achieved.

How we do this is to issue into the factory a form of time card which specifies, in addition to the usual detail of the job, the part number which is to be manufactured or the assembly number and the time allowed to carry out that particular part of the work.

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If all our estimated times are up 10 per cent on the total time which we can afford, then the production men are required to carefully examine the question to see whether they cannot cut their estimated time, so as to conform to the amount of time permissible.

It will usually be found that they can, but if they are definitely of the opinion that they cannot, then the order is of no use to us. On the other hand, if there is good reason to believe that they can cut the time sufficiently, then the order is of some use to us, and we have every right to accept it at the competitive price, and then to aim at conforming to the time and materials specifications set out.

I believe that I have covered the subject reasonably, but, naturally, it must be understood that costing is a very comprehensive study, and no man can hope to set out and in an hour to cover every phase of costing.

The importance of our science grows daily, and with war-time manufacturing going on, it has become officially recognized to such an extent that the authorities have laid down a special set of rules which they refer to as "Appendix (1)," and they are prepared to let contracts on the basis of what is known as "Cost Plus," provided costing is carried out in accordance with "Appendix (1)".

Every manufacturer must be aware of the necessity for accurate costing, and we cannot help but feel that there are many names on our lists of bankruptcies each year which would never have been there had the persons concerned availed themselves of the services of commercial accountants able to handle their manufacturing costing.

The Chief Financial Officer and Business Management

By H. G. NORMAN,
Chartered Accountant, Montreal,

An Address Delivered Before Ottawa Chapter, January 18th, 1943

The subject upon which I am asked to speak to you to-night is one on which much has already been written and which has been so fully discussed that it would seem best that I confine my remarks to the general outline of a corporation's financial and accounting organization, and express briefly certain views based upon personal experience and observation.

Financial Organization—The words, chief financial officer, apparently contemplated that there is only one such person in an organization of a large corporation whereas there should be at least two, namely the treasurer and the comptroller, both of whom are financial officers and should be responsible individually to the president and the board of directors but neither responsible to the other but complementary to each other.

In many large corporations there is also a third financial officer, the internal auditor, whose duties differ entirely from those of the other two mentioned officers and who in some cases is directly responsible to the president of the corporation and in others to the comptroller. It would appear preferable for the auditor to be responsible to the president or board

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of directors as he acts as "policeman" and checks the work of all in so far as their activities pertain to finance and accounts.

The problem of line of responsibility is considerably more confused in practice than is the segregation of their duties. For the maintenance of proper internal control the segregation of duties in itself is not enough; the line of responsibility must also be clearly defined. There are of course many possibilities depending upon the size of the organization and to some extent the nature of the business but the following chart indicates in solid lines the preferable line of responsibility:

BOARD OF DIRECTORS

Finance Officer	Finance Officer (Vice-President)	Finance Committee
Treasurer	Comptroller	Auditor
Receipts and Disbursements	Accounting Records and Interpretations	Auditing of all Financial Records

The original assignment of my subject referred to the relationship of the treasurer, comptroller, chief accountant or other chief financial officer to management. In the case of corporations having a comptroller it is usual for the chief accountant to be directly responsible to him but in the case of corporations not having a comptroller so nominated then the chief accountant should carry out the duties normally assigned to the comptroller and should report to the president or the board of directors. In any event wherever possible the comptroller or the chief accountant and the internal auditor should not report to the treasurer in order that internal check in its broadest sense may be exercised. At the time of the appointment of the treasurer and comptroller by the president or the board of directors it should be specified that both such officers should attend all meetings of the board, which procedure would be helpful to the efficient carrying out of their duties and also of assistance to the board.

Relationship of Chief Financial Officers—The relationship of the three financial officers must at all times be close as their functions are complementary. This is necessary since information must be furnished by the one to the other in order that the greatest value to all may be obtained. Such an interchange of information does not nullify the internal check as all reports finally go direct to the party to whom each is responsible. It may be said that the financial budgets are the responsibility of the treasurer, but he must to a great extent rely on information prepared by the comptroller as to forecasts of sales and costs. These forecasts to some extent may be based upon financial data as to anticipated rises or falls in customer demand, rising cost of commodities, labour rates, living costs, etc. Further the treasurer in checking against his financial budget must receive data from the comptroller as to accounts receivable, collected and outstanding, accounts payable paid and outstanding and progress made on capital expenditures budgeted for and not budgeted for. The internal auditor must of course have access at all times to all the records of both the treasurer and the comptroller.

The Functions of Treasurer—There is general agreement that "cash" is the particular concern of the treasurer. Therefore the receipt and dis-

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busement of all moneys are his functions as well as the creation of the related entries. Accounting control over these activities is maintained under the supervision of the comptroller.

The treasurer is called upon to have funds on hand as needed for all corporate purposes and is therefore vitally concerned with the budget and relations with banks and other sources of borrowed funds. He should prepare a financial budget and cash forecast in collaboration with the other budget officers. Such a forecast should not only be for current needs but also for a long term program, and this necessitates studies of trends of prices of commodities, living costs, labour costs, cycles of trade generally and his own business in particular, tax trends both Dominion, provincial and civic, probable capital expenditures, renewals and replacements, provision of funds through depreciation, dividend policy of the company and all other factors which would affect the income and outgo of funds.

He should have the power to arrange short term loans up to a limit set by the finance committee. Similarly the investment of surplus funds, sinking funds, depreciation funds as available may be made by the treasurer under the direction of the finance or executive committee.

The credit manager is usually responsible to the treasurer in determining credit policies notwithstanding such policies may have substantial effects on sales as well as on the use of invested capital.

The treasurer is the custodian of cash and often of the following securities, contracts, etc., although these may be held by an alternate as noted hereunder:

Alternate or Custodian

Bonds and certificates	Secretary, bank for safe-keeping.
Notes and negotiable instruments	
Contracts	Secretary, purchasing department, sales department.
Leases and real estate deeds	Secretary.
Insurance policies	Secretary or insurance department.
Tax reports and returns	Secretary, comptroller, tax department.
Copyrights, trademarks, patents	Secretary.

Certain of those mentioned are kept in safety deposit boxes, access to which should be had by not less than two officers, one of whom should be the treasurer. The remainder are usually kept in the office and may be in the custody of the alternates or simply in the filing department.

The treasurer may be held responsible for bonding employees, managing non-operating properties, satisfying himself that adequate insurance is carried, recommendations to the finance committee with respect to financial policies as well as furnishing that committee with reports of the financial position in relation to the financial budgets previously submitted, giving reasons for any major differences after consultation with other officers of the company, whom such differences concern.

As purely administrative functions the treasurer is usually invested with powers to do the following and is also the signer on bonds and stock certificates:

- Endorse negotiable instruments
- Sign cheques

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Deposit cash receipts
Operate petty cash funds
Transfer funds between banks.

It is of course understood that the treasurer is responsible for the operation of his own department and that he may or may not carry out all his own personal duties.

Functions of the Comptroller—The present position of comptrollership functions may, I think, be traced to the official in government posts known as a "comptroller" who is called upon to perform special duties as defined by law, the main purpose of which is to see that only those funds appropriated are disbursed and that they are disbursed for the purpose set forth in the appropriation.

This government function came into business when the business unit grew not only in size but in its geographical location so that it became necessary to charge one individual with the responsibility of seeing that the appropriation of funds by the directors and officers was followed.

The complexities of modern business, particularly their growth of the last twenty years in relation to taxation, governmental control, competitive situations, national distribution, modernized factory practices, etc., have brought about a condition in which it is not only advantageous but necessary to set up controls so that exact and workable records may be maintained in such a manner that detail as well as general information may be available at all times. This has brought about a widening of the functions of the comptrollers from that envisaged in governmental practice and in many cases of the individual who, though not so named, yet carries out the duties of a comptroller.

In addition to the common functions of a comptroller there are many special duties which vary so much from industry to industry that they may perhaps be expressed by stating that, whenever there is a difficult problem to be solved, the comptroller shall have built up such a degree of confidence that he is included automatically in the group called upon to solve such problem.

The supervision of all accounting matters and the necessity of assuring himself that the policies of the corporation, as set forth by the board of directors and finance committee, are being implemented, call for him to inquire into every activity of the corporation, manufacturing, selling, etc., because these all involve the receipt and use of funds. The accounting should soon resolve itself into routine work, with the exception of special points arising from time to time, thus leaving the comptroller time to devote his attention to making the accounts of use for administrative purposes. In effect the comptroller should not become a recorder of historical information only but must have a good knowledge of selling, advertising, production, and of taxation and other laws affecting the industry in which he is engaged, and he should use such knowledge to aid and advise the management in formulating policies of all kinds.

Functions of a comptroller common to all business are to maintain adequate records of all transactions of the corporation and of the resultant assets and liabilities, and to initiate and enforce, in conjunction with other officers of the corporation, such measures and procedures whereby the busi-

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ness may be conducted with the maximum of safety, efficiency and economy. Such duties shall extend to subsidiary companies if such are in existence.

A brief resume of the duties of a comptroller may be stated as follows:

Installation and supervision of all accounting records,

Preparation and rendering of all bills and maintenance of accounts receivable ledger,

Computation of production costs and costs of distribution,

Preparation of statistical records,

The taking and costing of all inventories,

Preparation and filing of all tax returns,

Budget preparation in conjunction with other officers,

Initiation, preparation and issuance of standard practices relating to accounting matters and procedures, including clerical and office methods, records and reports,

Ascertainment that financial policies and transactions covered by the minutes of the board of directors are executed and properly recorded,

Reading of all contracts entered into so as to institute necessary accounting procedure in order that all payments to be received or paid out are made, and

Preparation of annual statement for submission to the board of directors.

From the above it may be seen that through the duties performed by the comptroller he becomes conversant with every phase of the organization with the result that he is one of the officers who should automatically become an integral part of the management and a very essential cog in determining policies of the business. As a result of the statistics produced by him on costs he can act as an adviser to the production manager and if his advice is not taken after careful consideration and no improvement arises in the costs of production it is his duty to bring his suggestions forward to the senior officers for their consideration.

It is essential also for the comptroller to interpret the many statements which are prepared for presentation to the management. Statements of all characters to-day are so voluminous that it is practically impossible for the officers of a business to examine them in detail. Thus it becomes necessary for the comptroller to present in the form of a few brief pithy statements the salient facts as to results and information relative thereto from which the management may form their opinions and enquire for further details if they so wish. It is also essential that the comptroller should produce for the junior executives statistical information, which will help them in deciding day-to-day problems, and in this way make a real contribution to operating effectiveness.

Relationship of Comptroller to Chartered Accountants—The audit of the accounts of a corporation involve not only a check on the propriety and authority of all expenditures and the correctness of receipts but equally as important a review of the accounting principles used in determining the basis on which the accounts are prepared—as, for instance, what items are to be capitalized, what items shall be deferred to future operations, the bases for depreciation and amortization, etc.—and in general the classification of the accounts, also a review to determine that the principles used are

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consistent with those of prior years. It therefore becomes necessary for the chartered accountant to have a very close relationship with the comptroller who is in the main responsible for the policies which govern all phases of the accounts, as well as for the correct presentation thereof, and who should be familiar with all data in regard thereto.

As the one responsible for the accounts of a company, the comptroller is the logical one with whom the chartered accountant raises all questions as to principle or practice and through whom contacts should be made with the various members of his staff as well as with the head of the operating and sales divisions of a business.

It should be realized that the accounts of a corporation as presented to its shareholders are the responsibility of the officers of the corporation and that the auditor's certificate indicates to the shareholders that he is or is not in accord with the presentation made by such officers. It therefore becomes essential that any proposed major changes in accounting policies, as well as points of principle involved in the treatment of particular items, be discussed fully by the comptroller and the chartered accountant so that they may be in accord before changes or decisions are made by the officers of the corporation. In this way it is possible to avoid last minute discussions of important matters under the pressure which accompanies the necessity of having the annual statements signed by a given date.

At the time of the installation of the system of accounts, either the general accounts or cost accounts, of any business there should be close collaboration between the comptroller and the chartered accountant so that the former may have the benefit of the experience of the latter and the latter may have full knowledge of the reasons upon which the form of the accounts is based and be thus able to arrange his audit with full knowledge thereof.

As the question of taxation has become so important to all business and as this subject is one on which all chartered accountants endeavour to keep themselves fully informed, it would appear sound business practice for the comptroller to discuss with the chartered accountant any proposed changes, either in the financial structure or otherwise, which may have a bearing on taxation. In this way he can take advantage of the latter's experience acquired through dealing with tax matters for many and varied clients, as well as of such knowledge as the chartered accountant may have of the tax gatherers' attitude towards the various problems which he has had occasion to discuss with them.

It is needless for me to state that reports to be made by business to-day to various governmental bodies, such as taxing authorities, labour bureaus and the foreign exchange control board, are bringing about a necessity for the keeping of accurate records which will enable all of the returns called for to be made without undue disturbance of business routine. The present war condition will bring about a further demand for more returns to be made to governmental bodies from time to time, all of which must be filed as promptly as possible in order that business may thus permit of the government deciding on policy and executive action from day to day.

The comptroller naturally therefore finds himself as key-man for the purpose of the preparation of all of these forms and as such it is necessary

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for him to keep in constant touch, not only with the various bills passed by governmental authorities but also with the regulations issued by such authorities, as well as a personal contact with those charged with the administration of such laws and regulations.

It appears to me that there is no person more qualified to have connection with and to discuss the affairs of business with the various governmental bodies than the comptroller. He can be of considerable assistance to the government in suggesting to its various departments amendments to existing laws as well as suggestions for future laws which would not have, of necessity, direct financial benefits to the business which he represents but which would be of benefit to the country as a whole. Moreover such suggestions can serve to make the various laws and regulations more understandable and workable than some of them may be considered to be at present.

Internal Auditor—As already indicated the internal auditor's functions are to act as a "policeman" on all of the officers and employees of a business who may have any contact with financial transactions and/or the physical handling of inventories. His duties are to see that all of the transactions of a company are carried out in accordance with the financial policies laid down as well as to see that all disbursements are properly authorized and voucherized and that all receipts to which the Company is entitled are received and properly recorded in its accounts.

The reports of the internal auditor should be directed to either the financial vice-president or the finance committee. Copies thereof should be furnished to the comptroller so that the latter may be in a position to remedy any defects in the accounting system which may be brought to light as a result of the internal auditor's work. It is also essential that copies of these reports be made available to the chartered accountant—the outside auditor—so that the latter may be apprised of the extent of the work which has been done by the former and may so arrange his program to avoid any undue degree of overlapping, but at the same time to carry out sufficient tests to see that the work of the internal auditor is properly carried out.

In closing I would like to emphasize that the work of the members of your Society and the work of chartered accountants are and should be considered as complementary and not as overlapping since to a considerable extent your activities are not only concerned with costs and management but also with factory practice, whereas our functions are essentially confined to auditing, accounting taxation practice and financial advice. It is therefore essential that as great a spirit of co-operation as possible should exist between your organization and chartered accountants. The greatest benefit may then accrue to all of our clients as well as to the governmental bodies which we may be called upon to serve, particularly at this time when it is the duty of everyone to do all in his power to aid the Government in its war effort.

The Job Cost Fiend

F. MURPHY, A.F.I.A., Dip.Com.

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One day when you are in the mood for adventure and so miserable that you could not possibly be bored, permit yourself to be inveigled into conversation (?) by one of the great giants of knowledge, the Job Cost Expert. You will not fail to find one; they litter the arena of commerce like leaves in the forest. If your patience is not less than your thirst for knowledge you are to be pitied; if you seek a repetition of the discourse (provided that you get your say), you are beyond the stage when pity is deserved.

The Job Cost Expert is identifiable by his never-failing characteristics: (a) his business is unique; (b) he understands it thoroughly; (c) he has not qualified (didn't bother, could of course, quite easy) but is more informed than the qualified man, since, you have his assurance, he is practical; (d) unlike the theorists, he has made a definite study of costing.

As there are so many different and distinct kinds of business, it seems almost inconceivable that they can all fit into the monotonous and dull life of work, without affording some touch of colour. So it is, for each Job Cost Expert has the most intricate and involved type of business.

The main tenets of their religion — costing occupying that place of honour during working hours—are vague and varied, but uniform with them all. They are definitely a class to themselves, radically more rigid than the polar bears.

If you are one of those inquiring students—if you are, you ought to know that there are already enough without you—you might be tempted to converse with one of these Job Cost Fiends. Don't! The conversation would run something like this:

J.C.F.: "The object of costing is, of course, to find out how much a thing costs."

I.S. (slightly interested): "That would be necessary to help to fix the selling price."

J.C.F. (very shrewdly): "The price is decided by the state of the market, and is not less than replacement cost plus profit."

I.S. (enjoying the thirst for knowledge): "Oh! The price is how much it would cost if you made it again."

J.C.F. (hastily): "Absurd. How would you know the cost until you made it?"

I.S. (slightly dismayed): "Couldn't you calculate the cost?"

J.C.F.: "That's not a cost—that is an estimate."

I.S. (delighted with the progress): "You have to make it before you are sure of the cost"

J.C.F. (very definite): "Costing does not ensure that you know the true cost it merely guarantees that the cost is sufficient to recoup your expense and make a profit."

I.S.: "It is necessary to cost to ascertain your profit."

J.C.F. (impatiently): "No. Your profit is arrived at from your profit and loss account."

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I.S. (very doubtful): "Does your profit and loss account tell you your profit?"

J.C.F. (shaking his head): "There is no way of finding out exactly what the profit is; no one could give you a comprehensive definition of profit."

I.S. (thoughtfully): "I would have thought that you would have got your profit from your cost account."

J.C.F. (very exasperated): "There is no cost account—you arrive at your figures through your cost records."

I.S.: "Why keep them? They do not tell you either your cost or your profit."

J.C.F. (gasping for breath): "You have got to keep them or you wouldn't have costing."

I.S. (quite frankly): "It doesn't seem to be of any use."

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